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AMSAT NEWS SERVICE
ANS-276
The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-276.01
ANS-276 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 276.01
 >From AMSAT HQ KENSINGTON, MD.
DATE October 2, 2016
To All RADIO AMATEURS
BID: $ANS-276.01

NuSat-1 Issued Oscar Number LO-87

The Argentine ÑuSAT-1 carrying the LUSEX (LU Satellite Experiment) Amateur Radio U/V linear transponder and 436 MHz beacon launched May 30 at 0317 UTC from China. The transponder, with a 30 kHz bandwidth and transmitting with 250 mW, will has an uplink passband (SSB, CW) at 435.935~435.965 MHz, and a downlink passband at 145.965~145.935 MHZ. Basic CW telemetry is transmitted on 145.900 MHz. The NuSAT-1 GFSK telemetry beacon is at 436.445 MHz, and the NuSAT-2 GFSK telemetry beacon is at 437.445 MHz. Over the past month AMSAT-Argentina has requested the issuance of an OSCAR designation. After review, the following determination has been announced:

"I join the entire world in wishing this spacecraft a successful life and, under the authority vested in me by the AMSAT-NA President, do

hereby issue LUSEX the designation LUSEX OSCAR 87 or LO-87."

73,
William A. (Bill) Tynan, W3XO
OSCAR Number Administrator

See
http://lusex.org.ar/

[ANS thanks AMSAT-NA for the above information]

AlSat-1N and Pratham Satellites Launched, Heard, and Identified

The AlSat-1N and Pratham satellites, both with amateur radio payloads, launched on the Indian ISRO PSLV-C35 mission at 0342 GMT on Monday, September 26, 2016, reports are requested.

Update Sept 27: The AlSat-1N signal has been received but nothing heard from Pratham. A Dorset radio amateur reports receiving a signal from PISAT (2240 MHz) which was also on the PSLV-C35 launch
https://twitter.com/uhf_satcom/status/780808329392168960

Update Sept 29: Reports on AMSAT-BB indicate the Pratham CW beacon on 145.980 MHz is active.
http://www.amsat.org/pipermail/amsat-bb/2016-September/060551.html
http://www.amsat.org/pipermail/amsat-bb/2016-September/060552.html

The 3U CubeSat AlSat-1N was built in collaboration between the Algerian Space Agency (ASAL), UK Space Agency (UKSA), Surrey Space Centre (SSC) staff and Algerian students as a technology transfer and demonstrator for Algeria.

AlSat-1N is also hosting three UK payloads from various institutions and aims to take images of the Earth and send back data from the UK payloads.

The IARU coordinated downlink is 437.650 MHz 9k6 FSK.

Any downlinked data will be gratefully received at alsatnano(a)gmail.com Both decoded hex files and recordings would be greatly appreciated. Richard Duke M0GSN is transmission authority in the UK under the SSC Club callsign M0GKK.

Further information on AlSat-1N can be downloaded from:

https://ukamsat.files.wordpress.com/2016/09/alsat-1n_description_v1.pdf
https://amsat-uk.org/2016/09/24/alsat-1n-pratham-launch/

Information on the Pratham student satellite is at
https://amsat-uk.org/2016/09/07/pratham-student-satellite/

Detailed doppler measurements show that Pratham is object 41791, 2016-059J.

This is based on the most recent TLE sets, that were published by the JSpOC. Unfortunately the collection of TLE sets for the PSLV-C35 launch is not stable yet. The JSpOC continues to cross-tag TLE sets and to make major changes to some of the TLE sets. So some further changes may be expected in the coming days.

The JSpOC has not yet identified any of the objects from the PSLV-C35 launch. It seems quite obvious however that ScatSat is object 41790, 2016-059H.

[ANS thanks AMSAT-UK, AMSAT-BB, and Nico, PA0DLO, for the above information]

AO-7 Mode A

Noted on the AMSAT-BB:
It appears that AO-7 switched to Mode A between 0400 and 0600 UTC today 9/30/2016. That suggests that the satellite is now in constant sunlight and receiving enough power from the solar cells for the 24 hour timer to stay on throughout it's entire orbit. Expect daily mode switches between Mode A and Mode B to occur for the next three months or so.

As AO-7's orbit precesses and the periods of constant sunlight become fewer and fewer, there will be less of an opportunity to use Mode A on a yearly basis, so enjoy it while it lasts!

If you don't have a 10 meter antenna up to receive the downlink, try whatever you can. I have used my AlexLoop Walkham Portable Magnetic Loop with adequate results.

[ANS thanks Paul Stoetzer, N8HM AMSAT-NA Secretary for the above information]

BATC Convention Includes Satellite Topics

The British Amateur Television Club hosted a number of presentations covering the latest equipment, modes and operating techniques (including satellite topics) at the Convention for Amateur Television 2016 (CAT 16) at Cosford on 24/25 September.

The satellite presentation slides and videos included:

Receiving and Presenting HamTV from the ISS
Noel Matthews, G8GTZ

Es'hail-2: Geostationary transponder for DATV
Graham Shirville, G3VZV and Dave Crump, G8GKQ

Links to the slides and video recordings are available on-line at:
https://wiki.batc.tv/Presentations_from_CAT_16

[ANS thanks the BATC for the above information]

ARRL to Host CHIRP Radio Programming Webinar

ARRL will host a CHIRP Radio Programming webinar on Wednesday, October 19, at 8 PM ET (0000 UTC on Thursday, October 20, in US time zones). This presentation will offer a brief overview of the free, open-source CHIRP software, which can be used to program most radios.

The site at http://chirp.danplanet.com/projects/chirp/wiki/Home explains what the CHIRP software does.

Attendees will learn: What CHIRP is, which radios are supported, how to get CHIRP, and how to troubleshoot CHIRP. Presenter James Lee, N1DDK, became active in CHIRP development for the initial TYT9800 driver. He is a hardware development engineer for Qualcomm.

Register now at https://attendee.gotowebinar.com/register/693479953177190401

After registering, you will receive a confirmation e-mail containing information about joining the webinar.

[ANS thanks the ARRL for the above information]

NASA Next Magazine for Teens and Educators

NASA's Goddard Space Flight Center in Greenbelt, Maryland, recently released the second issue of its new online news magazine for teens and educators called "NASA Next."

"NASA Next" breaks down complex science and brings its audience the latest news on Goddard science, including studies of Earth, the sun, our solar system and the universe. "NASA Next" is interactive with clickable links to other NASA web pages, so readers can learn more about the missions and technologies they come across.

The magazine includes articles, fun facts, activities and a For Educators page filled with lesson plans to help incorporate "NASA Next" into the classroom. Educators and scientists review all lesson plans to ensure that the content is accurate and useful in an educational setting and that it meets national and state standards of learning.

For more information and to download the latest issue, visit http://www.nasa.gov/feature/goddard/2016/nasa-announces-new-issue-of-nasa-next-online-news-for-teens-educators.

If you have questions about "NASA Next," please email your inquiries to Sarah Schlieder at sarah.schlieder(a)nasa.gov.

[ANS thanks NASA Education Express Message -- Sept. 29, 2016 for the above information]

Sign Up for NASA Education 'Science WOW!' Weekly Email Newsletter

Are you a science educator or interested in science education? Sign up for the NASA Education "Science WOW!" mailing list. Receive an email with NASA's latest science education offerings delivered "Weekly on Wednesdays."

Science starts with a question, and so does "Science WOW!" Each week's message kicks off with a science question and a link to where you can find the answer. "Science WOW!" also highlights an awesome science education tool each week. These featured resources will include NASA apps, interactive games, 3-D printing templates and more!

Plus, "Science WOW!" delivers -- right to your inbox -- the latest science education opportunities offered by NASA. It's a simple way to keep up with the latest professional development webinars, student contests, workshops, lectures and other activities.

To register your email address and be added to the list, visit https://www.nasa.gov/education/sciencewow/

[ANS thanks NASA Education Express Message -- Sept. 29, 2016 for the above information]

AMSAT Events

Information about AMSAT activities at other important events around the country. Examples of these events are radio club meetings where AMSAT Area Coordinators give presentations, demonstrations of working amateur satellites, and hamfests with an AMSAT presence (a table with AMSAT literature and merchandise, sometimes also with presentations, forums, and/or demonstrations).

*Friday and Saturday, 21-22 October 2016 – CopaFest 2016, south of Maricopa AZ

*Saturday, 12 November 2016 – Oro Valley Amateur Radio Club Hamfest in Marana AZ

*Saturday, 3 December 2016 – Superstition Superfest in Mesa AZ

*Saturday, 14 January 2017 – Thunderbird Hamfest 2017 in Phoenix AZ

*Saturday, 4 February 2017 – Palm Springs Hamfest in Palm Springs CA

*Friday-Sunday, 10-12 February 2017 Orlando HamCation in Orlando, FL

*Friday and Saturday, 17-18 February 2017 – Yuma Hamfest in Yuma AZ

[ANS thanks AMSAT-NA for the above information]

ARISS News

Successful Contacts

* C.E.PR. Almadén, Jaén, Spain, direct via EA7URJ or TBD
The ISS callsign was OR4ISS
The scheduled astronaut was Kate Rubins KG5FYJ
Contact was successful: Thu 2016-09-15 08:14:19 UTC

* Yamanashi Gakuin J. H. School, Kofu, JapanA direct via 8J1YGJH
The ISS callsign was NA1SS
The scheduled astronaut was Takuya Onishi KF5LKS
Contact was successful: Sat 2016-10-01 08:11:36 UTC 31 deg.

Yamanashi Gakuin Junior High School is located in Kofu, Yamanashi Prefecture.
Yamanashi Gakuin was founded in 1946. the current junior high school opened in 1996 on its 50th anniversary. The school has three grades and and enrollment of 244 students.

Yamanashi Gakuin was successful. They asked 16 questions and got 16 answers from Takuya. Signal condition not so good.
Audience: 60
Newspapers: 3

Upcoming Contacts

* Sekolah Kebangsaan Jalan Pasar 1, Kuala Lumpur, Malaysia, direct via 9M2RPN
The ISS callsign is presently scheduled to be OR4ISS
The scheduled astronaut is Takuya Onishi KF5LKS
Contact is a go for: Thu 2016-10-06 18:24:00 UTC 46 deg.

The school is invited by National Space Agency Satellite Ground Station with a call sign of 9M2RPN in conjunction with "National Space Challenge Prime Minister's Trophy 2016" as in past years.
Total of students: 746 students
Total of teachers: 43 teachers

* iSPACE, Cincinnati OH, telebridge via IK1SLD
The ISS callsign is presently scheduled to be OR4ISS
The scheduled astronaut is Kate Rubins KG5FYJ
Contact is a go for: Sat 2016-10-08 16:15:10 UTC 57 deg.

In 2001, iSPACE, a 501(c)(3) organization, incorporated as a STEM (science, technology, engineering and math) educational resource for schools throughout
the Greater Cincinnati region. The iSPACE mission is to make STEM learning exciting and to promote STEM career awareness, through interactive programs for students, educators and families in the region. iSPACE provides innovative and effective programs, events and learning experiences for students
(grades pre-K-12), their educators and their families including field trips,
outreach, professional development and other programs that stimulate interest
and appreciation for STEM. In 2015, iSPACE programs served a diverse population of 24,731 youth and 5,791 adults in more than 500 schools. iSPACE works diligently to collaborate within the regional and their programs are recognized for their effectiveness throughout the STEM community.
Through rigorous alignment to national and state standards and the utilization
of best practices, iSPACE continues to develop curriculum for educators and inquiry--based educational opportunities for students. iSPACE has made a mark in Greater Cincinnati for our high quality programs that measurably and

effectively inspire students in science, technology, engineering and mathematics, increase their content knowledge and introduce them to STEM careers.

Watch
http://www.ariss.org/upcoming-contacts.html
for information about upcoming contacts as they are scheduled.

[ANS thanks ARISS, Dave, AA4KN, and Charlie, AJ9N for the above information]

Satellite Shorts From All Over

VP5/AA4FL Practice Run

Gearing up for a VP5 visit and operation Oct. 16 - Nov. 2. Will be part of VP5DX CQWW SSB team but still have time for portable SAT operations. I worked 9 stations in a practice run from the University of Florida campus a few weeks ago. I should be able to operate SATs from Oct. 19-28. Equipment will be a FT-817 and arrow II. Will also have a TH-D7A as a backup for the FM birds. Practice runs were on AO-73 and FO-29 using the FT-817.

I will have another practice day on Sunday Oct. 9th. Please mark your calendar and work me that day from EL-89tp. My signal will be readable but not strong, which I am sure you will not mind when I am the DX station you are chasing. I will use that day as a teaching experience for the Gator Amateur Radio Club student members. You can see photos from our last event on their Facebook page. Feel free to friend me as well.

I have been told it has been ten years since there has been a SAT operation from VP5. My operation will not be from Provo (FL31) but from Middle Caicos (FL41cu). Check out the QTH on the VP5DX QRZ page. Do any AMSAT members have FL41 in their log?

Looking forward to working you from FL41cu.

[ANS thanks Jay, AA4FL for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive addi-tional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the stu-dent rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,

Joe Spier, K6WAO
k6wao at amsat dot org